

IN THE CLAIMS

Please amend the claims as follows:

1. (Previously Presented) An image forming apparatus, comprising:

a storing unit configured to store a program in accordance with which the image forming apparatus operates;

an acquiring unit configured to acquire an update program from an external source;

and

an updating unit configured to determine whether an electronic signature of the update program acquired by said acquiring unit is authentic and, if the electronic signature of the acquired update program is determined to be authentic, update the program stored in said storing unit using the acquired update program,

wherein the authentication of the update program is performed based on a message digest, the message digest being generated based on a configuration file of the update program and a unique identification of the external source.

2. (Canceled).

3. (Original) The image forming apparatus as claimed in claim 1,

wherein

said updating unit updates the program stored in said storing unit with the update program acquired by said acquiring unit, and updates an electronic signature of the program stored in said storing unit with the electronic signature of the update program.

4. (Original) The image forming apparatus as claimed in claim 1,

wherein

said acquiring unit is an update recording medium setting unit and the external source is an update recording medium to be set in the update recording medium setting unit, the update recording medium storing the update program and the electronic signature of the update program.

5. (Original) The image forming apparatus as claimed in claim 1,

wherein

said acquiring unit is a receiving unit that receives the update program and the electronic signature of the update program from the external source via a network.

6. (Original) The image forming apparatus as claimed in claim 1,

wherein

said storing unit further comprises a recording medium setting unit and a recording medium set therein, the recording medium storing the program.

7. (Original) The image forming apparatus as claimed in claim 1, further comprising:

an activating unit that determines whether the electronic signature of the update program and an electronic signature of a configuration file related to the update program are authentic and, if the electronic signature of the update program and the electronic signature of the configuration file related to the update program are determined to be authentic, activates the updated program,

wherein

said acquiring unit further acquires a configuration file and an electronic signature thereof from the external source; and

said activating unit determines whether the electronic signature of the update program and the electronic signature of the configuration file are authentic and, if the electronic signature of the update program and the electronic signature of the configuration file are determined to be authentic, activates the update program in accordance with the configuration file.

8. (Original) The image forming apparatus as claimed in claim 7,
wherein

said activating unit determines whether the electronic signature of the update program is authentic by comparing a message digest generated from the update program and a message digest obtained by decrypting the electronic signature of the update program.

9. (Original) The image forming apparatus as claimed in claim 7,
wherein

said activating unit determines whether the electronic signature of the configuration file is authentic by comparing a message digest generated from the configuration file and a message digest obtained by decrypting the electronic signature of the configuration file.

10. (Original) The image forming apparatus as claimed in claim 9,
wherein

the electronic signature of the configuration file is generated by encrypting a message digest of the configuration file and identification information of the recording medium.

11. (Original) The image forming apparatus as claimed in claim 10,
wherein

the identification information of the recording medium is a serial ID of the recording medium.

12. (Currently Amended) A method of updating a program stored in a recording medium of an image forming apparatus, comprising the steps of:

acquiring an update program and an electronic signature corresponding to the update program;

determining whether the acquired electronic signature of the update program is authentic; and

updating, if the acquired electronic signature of the acquired update program is determined to be authentic, the program stored in the recording medium using the acquired update program,

wherein the authentication of the update program is performed based on a message digest, the message digest being generated based on a configuration file of the update program and a unique identification of an [[the]] external source.

13. (Canceled).

14. (Original) The method as claimed in claim 12,

wherein

if the acquired electronic signature of the update program is determined to be authentic, an electronic signature of the program stored in the recording medium is updated together with the program stored in the recording medium.

15. (Original) The method as claimed in claim 12, further comprising the step of:

activating, if the acquired electronic signature of the acquired update program and an acquired electronic signature of an acquired configuration file are determined to be authentic, the updated program in accordance with the acquired configuration file.

16. (Original) An update recording medium that is used with the image forming apparatus as claimed in claim 4, the update recording medium storing the update program and the electronic signature thereof.

17. (Previously Presented) An image forming apparatus, comprising:
a storing unit that stores a program in accordance with which the image forming apparatus operates;
an acquiring unit that acquires an update program from an external source; and
an updating unit that updates the program stored in said storing unit using the update program acquired by said acquiring unit,

wherein after updating the program stored in said storing unit, said updating unit determines whether an electronic signature of the updated program is authentic and, if the electronic signature of the updated program is authentic, said updating unit maintains the updated program, and

the authentication of the update program is performed based on a message digest, the message digest being generated based on a configuration file of the update program and a unique identification of the external source.

18. (Canceled).

19. (Original) The image forming apparatus as claimed in claim 17,

wherein

said updating unit updates the program stored in said storing unit with the update program acquired by said acquiring unit, and updates an electronic signature of the updated program stored in said storing unit with the electronic signature of the update program acquired by said acquiring unit.

20. (Original) The image forming apparatus as claimed in claim 17,

wherein

said acquiring unit is an update recording medium setting unit and the external source is an update recording medium to be set in the update recording medium setting unit, the update recording medium storing the update program and the electronic signature of the update program.

21. (Original) The image forming apparatus as claimed in claim 17,

wherein

said acquiring unit is a receiving unit that receives the update program and the electronic signature of the update program from the external source via a network.

22. (Original) The image forming apparatus as claimed in claim 17,

wherein

said storing unit further comprises a recording medium setting unit and a recording medium set therein, the recording medium storing the program.

23. (Original) The image forming apparatus as claimed in claim 17, further comprising:

an activating unit that determines whether the electronic signature of the updated program and an electronic signature of a configuration file related to the updated program are authentic and, if the electronic signature of the updated program and the electronic signature of the configuration file related to the updated program are determined to be authentic, activates the updated program,

wherein

said acquiring unit further acquires a configuration file and an electronic signature thereof from the external source; and

said activating unit determines whether the electronic signature of the updated program and the electronic signature of the configuration file are authentic and, if the electronic signature of the updated program and the electronic signature of the configuration file are determined to be authentic, activates the updated program in accordance with the configuration file.

24. (Original) The image forming apparatus as claimed in claim 23,

wherein

said activating unit determines whether the electronic signature of the updated program is authentic by comparing a message digest generated from the updated program and a message digest obtained by decrypting the electronic signature of the updated program.

25. (Original) The image forming apparatus as claimed in claim 23,

wherein

said activating unit determines whether the electronic signature of the configuration file is authentic by comparing a message digest generated from the configuration file and a message digest obtained by decrypting the electronic signature of the configuration file.

26. (Original) The image forming apparatus as claimed in claim 25,

wherein

the electronic signature of the configuration file is generated by encrypting a message digest of the configuration file and identification information of the recording medium.

27. (Original) The image forming apparatus as claimed in claim 26,

wherein

the identification information of the recording medium is a serial ID of the recording medium.

28. (Previously Presented) A method of updating a program stored in a recording medium of an image forming apparatus, comprising the steps of:

acquiring an update program from an external source;

updating the program stored in the recording medium using the acquired update program;

determining whether an electronic signature of the updated program is authentic; and

maintaining, if the electronic signature of the updated program is determined to be authentic, the updated program,

wherein the authentication of the update program is performed based on a message digest, the message digest being generated based on a configuration file of the update program and a unique identification of the external source.

29. (Canceled).

30. (Original) The method as claimed in claim 28,

wherein

an electronic signature of the program stored in the recording medium is updated together with the program stored in the recording medium.

31. (Original) The method as claimed in claim 28, further comprising the step of:

activating, if the acquired electronic signature of the updated program and an electronic signature of a configuration file are determined to be authentic, the updated program in accordance with the configuration file.

32. (Original) An update recording medium that is used with the image forming apparatus as claimed in claim 20, the update recording medium storing the update program and the electronic signature thereof.